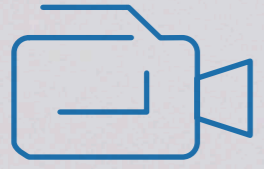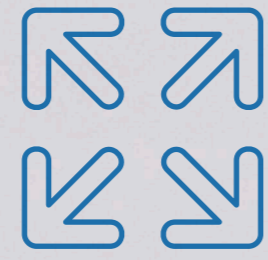# IMMERSIATV

A TOOLSET FOR THE PRODUCTION AND DISTRIBUTION OF IMMERSIVE CONTENT ACROSS DEVICES

OBJECTIVES

OBJ 1
Create a new cinematographic language where the specificities of immersive displays are taken into account, and which conciliates immersive paradigms with traditional storytelling techniques
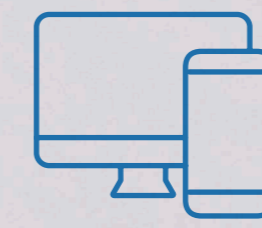
OBJ 2
Extend the production pipeline to create omnidirectional content for a multi-platform environment

OBJ 3
Re-design the distribution chain to address the specific technical challenges that omnidirectional content imposes in terms of capture, compression, distribution, reception, and rendering

OBJ 4
Maximize the quality of the end-user experience, across devices, and within the technical limitations of existing production structures, distribution facilities and reception devices to create an optimal immersive experience
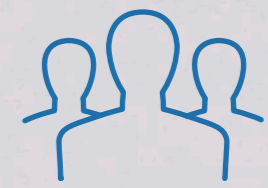
OBJ 5
Maximize the impact of the ImmersiaTV solutions within the ecosystem of content creators, broadcasters, and consumers

PROJECT WORKFLOW

CAPTURE > PRODUCTION > ENCODING > DISTRIBUTION > DISPLAY

1
Capture and stitching: New models of omnidirectional camera shooting multiple 4k videos that are processed and stitched together by advanced VahanaVR software

2
Off-line and live: Set of tools for off-line and live production of omnidirectional video content, combined with traditional 2D video portals and new features such as transitions and effects in 360° media content

3
New lightweight and low-latency video codec with Regions of Interest and QoE evaluation enables efficient encoding basing on real-time user's viewport feedback

4
Adaptative MPEG-DASH streaming of omnidirectional video with multi-platform content synchronization (DVB-CSS) and metadata defining interactive video portals

5
Multi-platform player based on Unity3D engine enables synchronized displaying of omnidirectional content with additional video portals on HMD, phones, tablets and TV sets

Project Coordinator & Technical Lead

i2cat FUNDACIÓ

To achieve these objectives, ImmersiaTV has assembled a unique combination of content creators (Lightbox), broadcasters (VRT), tooling specialists (Video-Stitch, Cinegy), and research centers covering the whole production chain, from capture (iMinds), encoding (EPFL, iMinds) and delivery (i2CAT, PSNC).

Cinegy   i2cat   imec   EPFL ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE   LIGHTBOX   PSNC   VideoStitch   vrt